

Applicant : James M. Clauss
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REMARKS

Claims 1-28 are pending in this application. Claims 1, 3, 6, 9, 10, 13, 20, 21, 23 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,815,154 ("Hirschtick") in view of Fischer et al, "Design Environments for Constructive and Argumentative Design" ("Fischer") and further in view of Lemke, "Using Critics to Empower Users" ("Lemke"). Claims 14, 15, 17, 18, 22 and 25 rejected under 35 U.S.C. § 103(a) as being unpatentable over Hirschtick in view of Fischer and Lemke and further in view of Weitzman et al., "Artificial Intelligence in Engineering Design" ("Weitzman"). Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hirschtick in view of Fischer in view of Lemke and further in view of Krause et al, "Processing of CAD-Data - Conversion, Verification and Repair" ("Krause"). Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirschtick in view of Fischer further in view of Lemke and further in view of U.S. Patent No. 5,790,780 ("Brichta"). Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being obvious over Hirschtick in view of Fischer in view of Lemke and further in view of U.S. Patent No. 6,232,982 ("Harding"). Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirschtick in view of Fischer in view of Lemke and further in view of Barequet et al., "Repairing Cad Models" ("Barequet"). Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirschtick in view of Fischer in view of Lemke in view of Weitzman and further in view of Barequet. Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 1-5, 7-17, 19-25 have been amended. Claims 26-28 are new: no new matter is added. The applicant respectfully traverses the rejections and requests reconsideration in view of the amendments and following remarks.

Claims 1-19

Claim 1 recites a method including the steps of identifying a failure within a first failed feature in a computer aided design (CAD) assembly comprising a plurality of features, and automatically providing a set of treatments for the failure within the first failed feature from

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which to select a treatment applicable to the failure. The set of treatments is based at least in part on the failure within the first failed feature, the failure is resulting from modifications of one or more features of the CAD assembly, and the first failed feature is excluded from the CAD assembly.

The Examiner acknowledges that Hirschtick does not disclose automatically providing a set of treatments for the failure within the first failed feature from which to select a treatment applicable to the failure. However, the Examiner asserts that Fischer discloses automatically providing a set of treatments for a failure, said set of treatments based at least in part on the failure within the first failed feature. The Examiner further asserts that Lemke discloses said failure resulting from modifications of one or more features of the CAD assembly.

Fischer and Lemke describe systems for critiquing a design of a kitchen "based on knowledge of design principles" (Fischer, page 271, column 2, first full paragraph), such as building codes, safety standards, and/or functional preferences. Critiquing consists of offering suggestions regarding the user's design, and the designer can either make changes to the design based on the suggestions, or the suggestions "can be ignored by clicking on mouse sensitive text" (Fischer, Fig. 1). The suggestions based on functional preferences can be ignored since functional preferences may vary from designer to designer, but even suggestions that are based on building codes and safety standards can be disregarded (Fischer, page 271, column 2, first paragraph). In the systems disclosed by Fischer and Lemke, neither a suggestion by itself nor ignoring the suggestion results in a critiqued design unit being excluded from kitchen design drawing. That is, a kitchen design drawing can be created in Fischer and Lemke despite including design units violating the design principles.

Criticizing a design unit in a kitchen design as described in Fischer and Lemke is not the same as "automatically providing a set of treatments for the failure within the first failed feature from which to select a treatment applicable to the failure", as required by claim 1. A design unit that violates a design principle is not a failed feature in a CAD

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assembly. A CAD assembly is an assembly of features. An assembly can start with one feature, like a block of clay, and additional features can be added, removed, resized, reshaped, etc. (Specification, p.1, lines 8-10). A failure in one feature in a CAD assembly can result in an inability to create a CAD assembly that includes the failed feature, e.g., the failed feature is edited or suppressed. Claim 1 recites a failure in a first failed feature, where the first failed feature is not included in the CAD assembly. By contrast, a kitchen design in Fischer or Lemke that includes a criticized design unit does not exclude the design unit from the kitchen design, and a designer may choose to ignore the criticisms. The criticisms relate to design principles, and do not cause a "failure" such that "feature" cannot be included in the design.

Therefore, neither Fischer nor Lemke disclose automatically providing a set of treatments for a failure within a first failed feature from which to select a treatment applicable to the failure, and a *prima facie* case of obviousness has not been established. For at least this reason, claim 1 is allowable.

Claims 2-19 depend from claim 1, and are therefore allowable for at least the same reasons.

Claim 8

Claim 8 is independently allowable for at least the following additional reason. Claim 8 depends from claim 1 (via claim 6) and includes the additional limitations of:

- providing an indication of at least one primary failed feature if the first failed feature is a secondary failed feature;
- providing an option to select from the at least one primary failed feature if the first failed feature is a secondary failed feature; and
- if a primary failed feature is selected, then providing a set of treatments applicable to the primary failed feature.

The Examiner acknowledges that Hirschtick does not disclose the additional limitations recited in claim 8, but asserts that Harding provides an indication of at least one primary failed feature if the first failed feature is a secondary feature and provides an

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option to select from the at least one primary failed feature if the first failed feature is a secondary feature. Even assuming the Examiner's characterization of Harding is correct (which is not conceded), nothing in the cited passage or anywhere in Harding discloses "if a primary failed feature is selected, then providing a set of treatments applicable to the primary failed feature", as required by claim 1. Further, this limitation is not disclosed in either Hirschtick, Fischer or Lemke. As discussed above, Fischer and Lemke only disclose critiquing design units for a kitchen design based on design principles, and the Examiner acknowledged that Hirschtick does not provide a set of treatments for a failed feature. Accordingly, the limitations of claim 8 are not disclosed in the references, and a *prima facie* case of obviousness has not been established. Claim 8 is therefore in condition for allowance.

Claims 20-22

Claim 20 recites an apparatus including first logic to identify a failure within a first failed feature in a computer aided design (CAD) assembly comprising a plurality of features, and second logic to automatically provide a set of treatments for the failure within the first failed feature from which to select a treatment applicable to the failure. The set of treatments is based at least in part on the failure within the first failed feature, the failure is resulting from modifications of one or more features of the CAD assembly, and the first failed feature is excluded from the CAD assembly.

For at least the reasons stated above in reference to claim 1, Fischer and Lemke fail to disclose automatically providing a set of treatments for a failure within a first failed feature from which to select a treatment applicable to the failure, where the first failed feature is excluded from the CAD assembly. Accordingly, claim 20 is in condition for allowance. Claims 21-22 depend on claim 20 and are allowable for at least the same reasons.

Claims 23-25

Claim 23 recites a machine readable storage medium having stored thereon machine executable instructions, execution of said instructions to implement a method

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including the steps of identifying a failure within a first failed feature in a computer aided design (CAD) assembly comprising a plurality of features, and automatically providing a set of treatments for the failure within the first failed feature from which to select a treatment applicable to the failure. The set of treatments is based at least in part on the failure within the first failed feature, the failure is resulting from modifications of one or more features of the CAD assembly, and the first failed feature is excluded from CAD assembly.

For at least the reasons stated above in reference to claim 1, Fischer and Lemke fail to disclose automatically providing a first the set of treatments for the failure within the first failed feature from which to select a treatment applicable to the failure, where the first failed feature is excluded from the CAD assembly. Accordingly, claim 23 is in condition for allowance. Claims 24-25 depend from claim 23 and are allowable for at least the same reasons.

Claim 19

Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. In view of the amendments to claim 1 and the remarks above, claim 1 is in condition for allowance, and accordingly claim 19 is also allowable.

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The required fees are computed below. Please apply these fees and any charges not covered, or any credits, to Deposit Account No. 06-1050.

	Current	Less	Previously Paid	=	Additional	Amount Due
Total Claims	28	-	25	=	3	\$54
Independent	03	-	03	=	-0-	\$0
First Presentation of Multiple Dependent Claims						\$0
Applicant hereby petitions under 37 C.F.R. §1.136 for a 0 month extension of time.						\$0
TOTAL FEE DUE						\$54

Respectfully submitted,

Date:

June 24/04B. Leeds
Brenda Leeds Binder

Limited Recognition under 37 CFR § 10.9(b)

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